CLAIMS

What is claimed is:

1. A field device for use in a process control system having a digital data bus, comprising:

a first communications interface communicatively coupled to the digital data bus that is adapted to process communications having a first protocol;

a second communications interface communicatively coupled to the digital data bus that is adapted to process communications having a second protocol different from the first protocol;

a memory; and

a processor communicatively coupled to the memory, the first communications interface and the second communications interface, wherein the processor is programmed to process the communications having the first protocol and the communications having the second protocol.

2. The field device of claim 1, wherein the processor is further programmed to use the communications having the first protocol for process control and to use the communications having the second protocol for configuration of the field device.

3. The field device of claim 1, wherein the first communications interface is further adapted to process communications having a first frequency band and the second communications interface is further adapted to process communications having a second frequency band different from the first frequency band.

4. The field device of claim 3, further comprising a first filter coupled between the digital data bus and the first communications interface, wherein the first filter couples communications having the first frequency band and the first protocol to the first communications interface and substantially attenuates communications having the second frequency band and the second protocol.

5. The field device of claim 4, wherein the first filter has a high cutoff frequency that is less than the second frequency band.

6. The field device of claim 4, further comprising a second filter coupled between the digital data bus and the second communications interface, wherein the second filter couples the communications having the second frequency band and the second protocol to the second communications interface and substantially attenuates the communications having the first frequency band and the first protocol.

7. The field device of claim 6, wherein the second filter has a low cutoff frequency that is greater than the first frequency band.

8. The field device of claim 1, wherein the first protocol is a HART communication protocol and wherein the second protocol is a Fieldbus communication protocol.

9. The field device of claim 1, wherein the first communications interface includes a modem.

10. The field device of claim 9, wherein the first communications interface further includes an amplitude adjustment circuit coupled to an output of the modem.

11. The field device of claim 1, wherein the second communications interface includes a media access unit and a protocol conversion unit coupled to the media access unit.

12. The field device of claim 1, wherein the memory contains a first software routine for processing the communications having the first communication protocol and a second software routine for processing the communications having the second communication protocol.

13. A method of communicating with a field device coupled to a digital data bus, comprising the steps of:

receiving communications having a first protocol in the field device via the digital data bus;

receiving communications having a second protocol different from the first protocol in the field device via the digital data bus;

processing the communications having the first protocol within a first communications interface communicatively coupled to the digital data bus; and

processing the communications having the second protocol within a second communications interface communicatively coupled to the digital data bus.

14. The method of claim 13, wherein the step of processing the communications having the first protocol within the first communications interface includes the step of using the communications having the first protocol for process control and wherein the step of processing the communications having the second protocol within the second communications interface includes the step of using the communications having the second protocol for configuration of the field device.

15. The method of claim 13, wherein the step of receiving the communications having the first protocol includes the step of receiving communications in a first frequency band and wherein the step of receiving the communications having the second protocol includes the step of receiving communications in a second frequency band different from the first frequency band.

16. The method of claim 15, further comprising the step of coupling the communications having the first frequency band and the first protocol to the first communications interface through a first filter that substantially attenuates the communications having the second frequency band and the second protocol.

17. The method of claim 16, wherein the step of coupling the communications having the first frequency band and the first protocol to the first communications interface through the first filter that substantially attenuates the communications having the second frequency band and the second protocol includes the step of establishing a high cutoff frequency in the first filter that is less than the second frequency band.

18. The method of claim 16, further comprising the step of coupling the communications having the second frequency band and the second protocol to the second communications interface through a second filter that substantially attenuates the communications having the first frequency band and the first protocol.

19. The method of claim 18, wherein the step of coupling the communications having the second frequency band and the second protocol to the second communications interface through the second filter that substantially attenuates the communications having the first frequency band and the first protocol includes the step of establishing a low cutoff frequency in the second filter that is greater than the first frequency band.

20. The method of claim 13, wherein the steps of receiving communications having the first protocol and communications having the second protocol different from the first protocol in the field device via the digital data bus includes the steps of using a HART communication protocol for one of the first and second protocols and using a Fieldbus communication protocol for the other one of the first and second protocols.

21. The method of claim 13, wherein the step of receiving communications having the second protocol different from the first protocol in the field device via the digital data bus includes the step of using a portable configuration tool proximate to the field device to send the communications having the second protocol.

22. The method of claim 21, wherein the step of using the portable configuration tool proximate to the field device to the send the communications having the second protocol includes the step of using a HART communicator.

23. A method of locally configuring a field device having a first communications interface for processing communications having a first protocol and a second communications interface for processing communications having a second protocol using a portable configuration tool, the method comprising the steps of:

communicatively coupling the portable configuration tool to the field device; and

sending configuration information from the portable configuration tool to the field device using the second communication protocol.

24. The method of claim 23, wherein the step of communicatively coupling the portable configuration tool to the field device includes the step of communicatively coupling the portable configuration tool to a field device that uses a Fieldbus protocol to communicate process control information.

25. The method of claim 23, wherein the step of sending configuration information from the portable configuration tool to the field device using the second communication protocol includes the step of using a HART communication protocol to send the configuration information.